SHRI RANG ENTERPRISE

www.shrirangenterprise.com

We Care™

Symbol of trust

Auth. Channel Partner

Bharat Bijlee

OUR TEAM

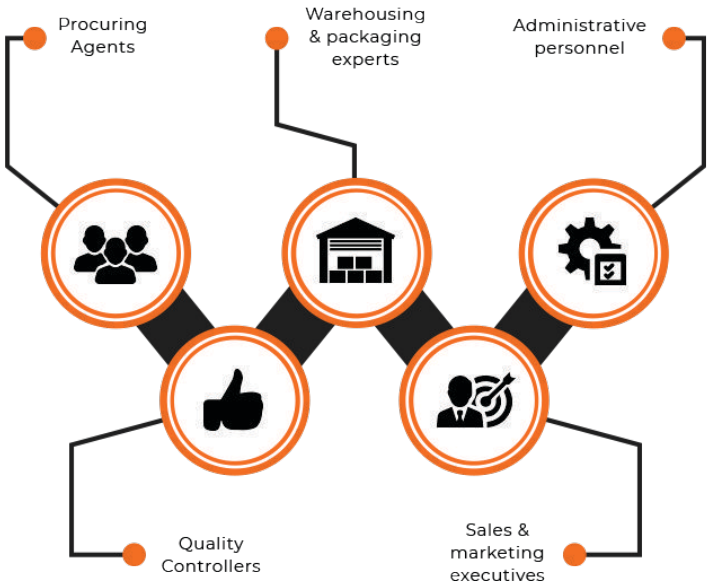
We have appointed a competent team of professionals, which greatly assists us in all the activities of our trade. These sincere, hard-working and dedicated experts are masters of their respective fields of specialization. Our professionals implement their in-depth knowledge and vast industry experience to successfully accomplish the assigned tasks. Furthermore, to attain the goals of the organization in an effective and efficient manner, these professionals work in close equilibrium with each other. Besides, we arrange training sessions and workshops at regular intervals to enhance the skills & knowledge of our team members. We have appointed a competent team of professionals, which greatly assists us in all the activities of our trade.

ABOUT US

SHRI RANG ENTERPRISE Established in the year 2005, we "Shri Rang Enterprise" are a paramount organization that is engaged in trading and supplying a commendable range of Standard Motors, Gear Motors, Reduction Gear Box. Our range of products encompasses Servo Motor, Flame Proof Motor, Electric Motor, Cooling Tower Motor and Single Phase Electric Motors. Also, we offer Standard Motors, Gear Motors, Reduction Gear Box and BCH Switch Gears. We are channel Partner of Indian Leading Company Bharat Bijli and BCH Motors.

The products offered by us are manufactured using excellent quality material and components by employing advanced technology at our vendors' state-of-the-art manufacturing facility. All our products are highly appreciated by the clients for their tough construction, brilliant performance, minimal maintenance, longer service life, corrosion resistance, low power consumption, easy installation and compact designs. These products are extensively applicable in all industries.

WE HAVE FOLLOWING EXPERTS IN OUR WORKFORCE



The industrial sector accounts for over half the total electricity consumption, of which 60 to 70% is utilized by electric motors. This indicates that the electric motors consume more energy than any other application.

A typical electric motor's average lifespan ranges anywhere between 15 to 20 years depending on the quality of raw material and manufacturing process. The operational cost of a motor is around 95% of the total life cycle cost. With a steadily increasing installed base of electric motors, our nation has a tremendous opportunity to save energy.

The purpose of energy efficiency labelling is to overcome the lack of awareness and also help end users in selecting from a range of energy-efficient products. While the developed world has kept pace with energy efficiency measures, the developing countries have been slower in implementing them for electric motors.

Minimum Energy Performance Standards (MEPS) was voluntary in the past but as per the recent mandate by the Indian Government, the minimum efficiency of 3 phase squirrel cage induction motors that can be manufactured and sold in the country needs to be IE2 efficiency level conforming to IS standards

Bharat Bijlee has always advocated the concept of energy saving for a sustainable future. It has always been our persistent endeavour to develop a wide range of motors in premium efficiency series thus rendering choice to customers to select from the wide range of energy efficient motors.

Established in 1946, Bharat Bijlee has evolved over the decades to provide a wide range of motors suitable even for the most severe of applications. Having gained the trust of our customers overthe years, we continue to be the most preferred brand as a result of our unique offering to the industry.

Why Bharat Bijlee?

- Preferred brand across multiple sectors like Cement, Construction, Steel, Food & Beverages, Water & Wastewater, Sugar & Distilleries to name a few
- Motors suited for all applications i.e. Pumps, Compressors, Fans & Blowers, Conveyors, Lifts, Screen, Vibrators, Centrifuges, Stone crusher & many more
- The most suitable solutions to extremely harsh and severe applications
- Customized motors designed and manufactured to suit application specific needs
- Motors conform to relevant IS/IEC standards

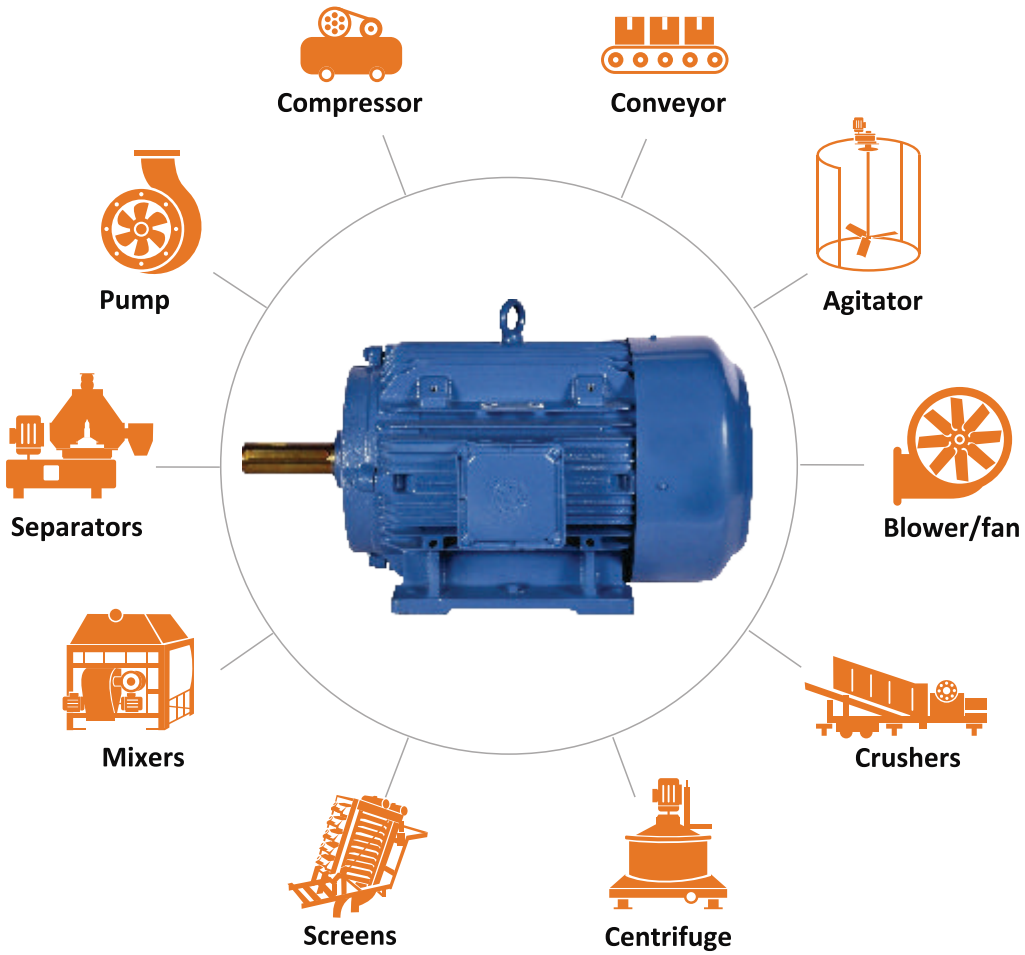
A MOTOR FOR EVERY NEED

REFERENCE STANDARDS

IS/IEC 60034-1	Three Phase Induction motor specifications ("Rotating Electrical Machines - Part 1: Rating & Performance")
IS : 900	Code of practice for installation & maintenance of induction motors
IS: 1231	Dimensions of foot mounted A.C induction motors
IS: 2223	Dimensions of flange mounted A.C induction motors
IS: 4029	Guide for testing three phase induction motors (For Standard TEFC SCR Motors)
IS: 4889	Methods of determination of efficiency of rotating electric machines (For Standard TEFC SCR Motors)
IS/IEC 60034-5	Degree of protection provided by the integral design of Rotating Electrical Machines (IP code classification)
IS: 6362/IEC 60034-6	Designation of method of cooling for Rotating Electrical Machines / Method of cooling (IC code)
IS:12065/IEC 60034-9	Permissible limits of noise level for Rotating Electric Machines
IS : 12075	Mechanical Vibration of Rotating Electrical Machines
IS : 12615	Energy Efficient Induction Motors Three phase Squirrel Cage
IEC 60034-30	Rotating Electrical Machines - Efficiency classes of line operated AC motors (IE code)
IEC 60072-1	Dimension & Output rating of Rotating Electrical machines
IS:15999 (Part 2 /Sec 1)	Standard Methods for determining Losses and Efficiency from Tests (For IE Series Motors)

BEARING CHART

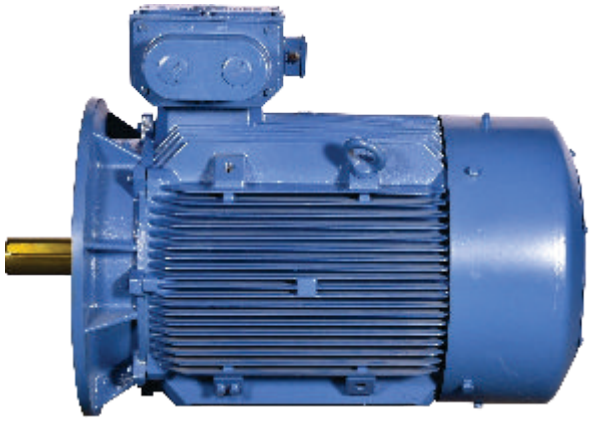
Fr. Size	Bearing Nos.	
	D.E.	N.D.E.
71	6202 2Z	6202 2Z
80	6004 2Z	6004 2Z
90 S & L	6205 2Z	6205 2Z
100L	6206 2Z	6205 2Z
112M	6206 2Z	6205 2Z
132 S / M	6208 2Z	6208 2Z
160 M/L	6309 2Z	6209 2Z
180 M/L 4P	6310 2Z	6309 2Z
180 M/L (2, 6, 8 Pole)	6310 2Z	6210 2Z
200 L	6312 2Z	6212 2Z
225 S/M	6313	6213
250M	6315	6215
280S/M (2 Pole)	6316	6316
280S/M (4, 6, 8 Pole)	6317	6316
315S/M & L	6319	6319
355L	6322	6322



GENERAL TECHNICAL SPECIFICATIONS

Range

- **Series:** 3 Phase Squirrel Cage Induction, IE2 Safe Area Motors
- **kW Rating:** 0.37 to 355
- **Frame**: 71 to 355
- **Polarity**: 2, 4, 6



Standard Feature	Optional Feature
Voltage: 415V	Any other voltage on request
Frequency: 50 Hz	60 Hz
IP55	IP56, IP65, IP66
B3 Mounting	B5, B35, B14 (upto 132 Frame)
Ambient: 50°C ; 40°C for DCCA Motors	Any other on request
Top TB: Upto 132 frame, 160 Frame (4 Pole), 250 to 355 Frame RHS TB: 160 Frame (2 & 6 Pole), 180 to 225 Frame	Any other on request
Aluminium Construction: 63 to 132 Frame Cast Iron Construction: 160 Frame & Above	Cast Iron construction: 90 to 132 Frame
Insulation: Class F	Insulation: Class H
IC411: Totally Enclosed Fan Cooled	IC410: Natural Ventilation IC416: Forced Cooling for 132 Frame & above
Sealed Bearing: upto 200 Frame Online Greasing Arrangement: 225 Frame & Above	Online Greasing Arrangement: 160 to 200 Frame
Paint Shade: Acrylic base, RAL5000	Any other shade or material on request
Fan Cover: Steel	
Thermal Protection in DCCA Motors: 3 nos. simplex RTD	Duplex RTD: For DCCA Motors Simplex & duplex RTD: 250 Frame & Above BTD: 250 Frame & above Thermister: 80 Frame & Above
Space Heater for DCCA Motors	Space Heater: 90 Frame & Above
Inverter Duty Application: 315 Frame & Above	Inverter Duty Application: Upto 280 Frame
Packing: Thermocol / Corrugated Boxes: Upto 132 Frame Packing: Wooden Packing Boxes: 160 Frame & Above	Wooden Pallets Sea Worthy / Export Packing Case
For standard bearings, kindly refer to the bearing chart	Insulated Bearing / Hybrid Bearing: 132 frame & above Cylindrical Roller Bearing with Locking Arrangement on DE Side : 160 frame & above

Our other optional features:

- Higher polarity
- Motors suitable for inverter duty application for all voltages
- Motors suitable for S2 to S9 duty operation
- VPI upto 280 frame
- Non standard shaft material, diameter & extension
- Front bearing locking arrangement
- SS Hardware, Canopy, non standard paint & paint shade, cable gland
- Provision for hollow shaft encoder mounting
- High temperature grease
- Reduced & Special grades of vibration as per IS 12075 can be provided on request

LV MOTORS: IE2 SAFE AREA

Performance Data : IE2 Efficiency Series for Safe Area Application

Applicable standard for testing & efficiency determination : IS15999
Voltage: 415V +/- 10%
Frequency: 50Hz +/- 5%
Combined Variation: +/- 10%

Ambient: 50°C
Duty: S1 (Continuous)
3000 rpm (2 Pole)

Insulation: Class F
Temperature Rise: Class B
Protection: IP55

Rated Output		Frame size	Type Reference	Operating characteristics at rated output									With DOL starting			Rotor GD²	Net Weight B3 constr.
				Rated Speed	Rated Current	Rated Torque	Power Factor			% Efficiency			Starting Current to Rated Current Ratio	Starting Torque to Rated Torque Ratio	Pullout Torque to Rated Torque Ratio		
kW	HP		B3 construction	RPM	Amps.	kg- m	FL	3/4L	1/2L	FL	3/4L	1/2L				kgm²	kg
0.37	0.50	71	2H0712A300000	2850	0.99	0.126	0.72	0.60	0.55	72.2	72.2	66.0	5.0	2.6	3.0	0.0019	7
0.55	0.75	71	2H07123300000	2805	1.29	0.191	0.79	0.72	0.58	74.8	74.0	70.0	5.0	2.7	3.0	0.0019	7
0.75	1.0	80	2H08021300000	2830	1.64	0.258	0.82	0.74	0.62	77.4	76.5	73.5	5.0	2.5	2.8	0.0037	10
1.1	1.5	80	2H08023300000	2830	2.34	0.379	0.82	0.75	0.63	79.6	79.6	75.5	6.0	2.7	3.0	0.0051	11
1.5	2	90S	2H09S243AT000	2835	3.09	0.52	0.83	0.77	0.66	81.3	81.3	80.0	6.0	2.6	2.8	0.0053	15
2.2	3	90L	2H09L273AT000	2835	4.33	0.75	0.85	0.80	0.70	83.2	83.2	82.5	6.0	2.8	3.0	0.0066	17
3.7	5	100L	2H10L233AT000	2890	6.84	1.25	0.88	0.83	0.73	85.5	85.5	83.0	6.5	2.8	3.1	0.0142	24
5.5	7.5	132S	2H13S2G3AT000	2930	9.88	1.83	0.89	0.86	0.79	87	87	84.5	6.5	2.5	3	0.0515	47
7.5	10	132S	2H13S2N3AT000	2935	13.3	2.49	0.89	0.86	0.8	88.1	87.7	86	6.5	2.5	3	0.0800	59
9.3	12.5	160M	2H16M23300000	2940	16.5	3.08	0.88	0.86	0.81	88.9	88.6	86.0	6.0	2.0	2.5	0.1420	98
11	15.0	160M	2H16M25300000	2940	19.5	3.64	0.88	0.85	0.79	89.4	89.4	87.0	6.5	2.1	2.6	0.1600	104
15	20.0	160M	2H16M26300000	2930	26.3	4.99	0.88	0.87	0.82	90.3	90.0	88.0	6.5	2.0	2.5	0.1910	115
18.5	25.0	160L	2H16L29300000	2930	31.5	6.15	0.90	0.89	0.86	90.9	90.9	89.0	6.5	2.0	2.5	0.2440	137
22	30.0	180M	2H18M23300000	2935	37.7	7.30	0.89	0.87	0.82	91.3	91.0	88.8	7.0	2.4	2.7	0.3400	177
30	40.0	200L	2H20L2A300000	2955	51.0	9.89	0.89	0.86	0.80	92.0	92.0	90.0	7.0	2.6	3.0	0.6100	274
37	50.0	200L	2H20L27300000	2955	64.0	12.20	0.87	0.84	0.76	92.5	92.5	91.0	7.0	2.2	2.5	0.6400	275
45	60.0	225M	2H22M25300000	2965	76.6	14.78	0.88	0.85	0.78	92.9	92.7	91.0	7.0	2.5	2.5	1.13	353
55	75.0	250M	2H25M23300000	2965	90.2	18.07	0.91	0.89	0.86	93.2	92.7	90.0	7.0	2.3	2.7	2.60	550
75	100	280S	2H28S23300000	2970	122	24.60	0.91	0.89	0.86	93.8	93.6	92.0	6.5	2.0	2.8	3.01	669
90	120	280M	2H28M25300000	2970	146	29.52	0.91	0.89	0.86	94.1	93.9	90.9	6.5	2.0	2.8	3.42	750
110	150	315S	2H31S23300000	2982	180	35.93	0.90	0.86	0.80	94.3	94.1	91.5	7.0	2.2	2.5	5.00	898
125	170	315M	2H31M2A300000	2982	207	40.83	0.89	0.85	0.78	94.5	93.5	91.5	7.0	2.2	2.6	5.00	940
132	180	315M	2H31M23300000	2982	216	43.11	0.90	0.86	0.80	94.6	93.6	91.3	7.0	2.0	2.5	5.00	940
150	200	315L	2H31L2A300000	2982	248	48.99	0.89	0.84	0.78	94.7	93.7	92.2	7.0	2.0	2.5	6.20	1100
160	215	315L	2H31L25300000	2985	261	52.21	0.90	0.86	0.80	94.8	94.1	93.0	7.0	2.4	2.5	6.20	1100
180	240	315L	2H31L2B300000	2982	300	58.79	0.88	0.82	0.75	94.9	94.1	93.0	7.0	2.0	2.5	7.70	1390
200	270	355L	2H35L2A300000	2985	325	65.26	0.90	0.87	0.82	95	94.2	92.2	7.0	1.6	2.4	12.00	1680
250	335	355L	2H35L21300000	2985	407	81.57	0.90	0.88	0.84	95.0	94.5	92.8	7.0	1.6	2.4	12.00	1680
315	425	355L	2H35L23300000	2985	513	102.78	0.90	0.88	0.84	95	94.5	93.0	7.0	1.6	2.4	14.70	1870

Note: All performance values are subject to tolerances as per IS/IEC 60034-1

LV MOTORS: IE2 SAFE AREA

Performance Data : IE2 Efficiency Series for Safe Area Application

Applicable standard for testing & efficiency determination : IS15999
Voltage: 415V +/- 10%
Frequency: 50Hz +/- 5%
Combined Variation: +/- 10%

Ambient: 50°C
Duty: S1 (Continuous)
1500 rpm (4 Pole)

Insulation: Class F
Temperature Rise: Class B
Protection: IP55

Rated Output		Frame size	Type Reference	Operating characteristics at rated output									With DOL starting			Rotor GD²	Net Weight B3 constr.
				Rated Speed	Rated Current	Rated Torque	Power Factor			% Efficiency			Starting Current to Rated Current Ratio	Starting Torque to Rated Torque Ratio	Pullout Torque to Rated Torque Ratio		
kW	HP		B3 construction	RPM	Amps.	kg- m	FL	3/4L	1/2L	FL	3/4L	1/2L				kgm²	kg
0.37	0.50	71	2H07143300000	1370	1.03	0.26	0.71	0.62	0.50	70.1	70.1	65.0	3.4	2.05	2.5	0.0033	7
0.55	0.75	80	2H08043300000	1420	1.38	0.38	0.74	0.64	0.50	75.1	75.1	68.0	5.0	2.8	3.0	0.0072	11
0.75	1.0	80	2H08045300000	1410	1.75	0.52	0.75	0.66	0.53	79.6	79.6	74.0	5.0	2.8	3.0	0.0082	12
1.1	1.5	90S	2H09S423AT000	1425	2.40	0.75	0.78	0.69	0.55	81.4	81.4	79.0	5.5	2.3	2.7	0.0106	15
1.5	2.0	90L	2H09L473AT000	1425	3.23	1.03	0.78	0.68	0.56	82.8	82.8	80.5	5.5	2.5	2.8	0.0130	17
2.2	3	100L	2H10L473AT000	1425	4.37	1.5	0.83	0.74	0.60	84.3	84.3	82.5	6.0	2.6	3.0	0.0211	24
3.7	5	112M	2H11M473AT000	1445	7.36	2.49	0.81	0.76	0.64	86.3	86.3	85.0	6.0	2.6	3.0	0.0494	32
5.5	7.5	132S	2H13S4K3AT000	1450	10.4	3.69	0.84	0.81	0.67	87.7	87.7	86.0	6.5	2.2	2.8	0.1026	48
7.5	10	132M	2H13M4T3AT000	1450	14	5.04	0.84	0.76	0.65	88.7	88.7	87.0	6.5	2.3	2.8	0.1254	57
9.3	12.5	160M	2H16M4C3CT000	1465	17.60	6.18	0.82	0.76	0.68	89.4	89.4	87.0	6.5	2.4	2.7	0.1870	99
11	15.0	160M	2H16M4K3CT000	1465	20.50	7.31	0.83	0.78	0.68	89.8	89.8	88.5	6.5	2.4	2.7	0.2850	109
15	20.0	160L	2H16L4T3CT000	1465	27.80	9.97	0.83	0.78	0.68	90.6	90.6	89.5	6.5	2.4	2.7	0.2930	132
18.5	25.0	180M	2H18M47300000	1465	33.2	12.3	0.85	0.82	0.76	91.2	91.2	89.5	6.5	2.7	2.9	0.5400	188
22	30	180L	2H18L48300000	1470	39.8	14.6	0.84	0.78	0.70	91.6	91.6	89.8	6.5	2.8	3.0	0.6100	200
30	40	200L	2H20L45300000	1470	52.6	19.9	0.86	0.82	0.72	92.3	92.0	90.0	7.0	2.6	2.6	0.9300	275
37	50	225S	2H22S43300000	1470	63.8	24.5	0.87	0.85	0.77	92.7	92.5	90.5	7.0	2.6	2.6	1.60	362
45	60	225M	2H22M45300000	1470	77.3	29.8	0.87	0.85	0.77	93.1	92.8	91.0	7.0	2.6	2.6	1.85	377
55	75	250M	2H25M43300000	1482	96.3	36.1	0.85	0.80	0.72	93.5	93.5	92.0	7.0	2.6	2.8	3.06	520
75	100	280S	2H28S42300000	1485	131.0	49.2	0.85	0.82	0.74	94.0	94.0	93.0	6.7	2.6	2.8	5.53	670
90	120	280M	2H28M45300000	1485	156	59.0	0.85	0.82	0.74	94.2	94.0	93.0	6.0	2.2	2.7	6.36	735
110	150	315S	2H31S41300000	1485	188	72.1	0.86	0.83	0.76	94.5	94.3	92.3	6.5	2.5	3.0	9.97	862
125	170	315M	2H31M4A300000	1486	216	81.9	0.85	0.81	0.74	94.6	94.3	92.7	6.5	2.5	3.0	11.70	965
132	180	315M	2H31M43300000	1487	225	86.5	0.86	0.83	0.76	94.7	94.5	93.0	6.5	2.5	3.0	11.70	965
150	200	315L	2H31L4A300000	1488	262	98.2	0.84	0.80	0.72	94.7	94.4	92.8	6.5	2.5	3.0	14.00	1145
160	215	315L	2H31L45300000	1487	270	105	0.87	0.84	0.78	94.9	94.6	93.1	6.5	2.4	3.0	14.00	1145
180	240	315L	2H31L46300000	1487	307	118	0.86	0.83	0.76	95.0	94.7	93.2	6.5	2.5	3.0	15.60	1225
200	270	315L	2H31L47300000	1489	340	131	0.86	0.83	0.76	95.1	94.8	93.3	6.5	2.5	3.0	17.76	1290
250	335	355L	2H35L41300000	1488	416	164	0.88	0.85	0.75	95.1	94.9	93.5	6.5	2.2	2.5	23.30	1680
315	422	355L	2H35L43300000	1488	524	206	0.88	0.85	0.75	95.1	94.8	93.5	6.5	2.2	2.5	32.70	1855
355	475	355L	2H35L45300000	1488	590	232	0.88	0.85	0.75	95.1	94.9	93.5	6.5	2.2	2.5	37.90	2025

Note: All performance values are subject to tolerance as per IS/IEC 60034-1

LV MOTORS: IE2 SAFE AREA

Performance Data: IE2 Efficiency Series for Safe Area Application

Applicable standard for testing & efficiency determination : IS15999
Voltage: 415V +/- 10%
Frequency: 50Hz +/- 5%
Combined Variation: +/- 10%

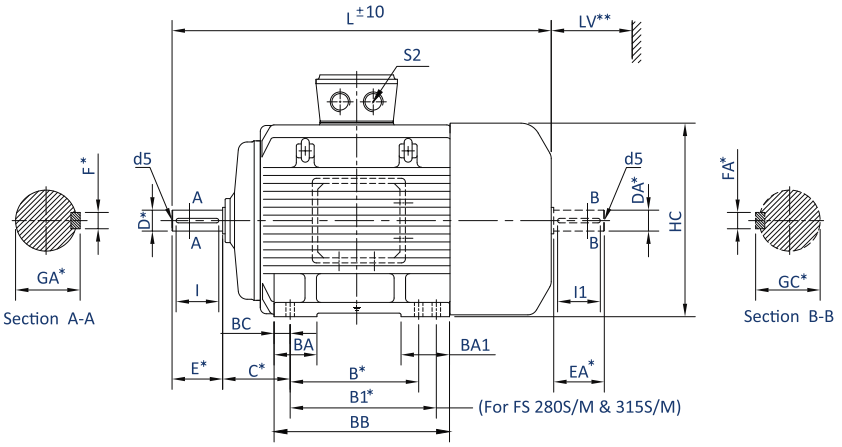
Ambient: 50°C
Duty: S1 (Continuous)
1000 rpm (6 Pole)

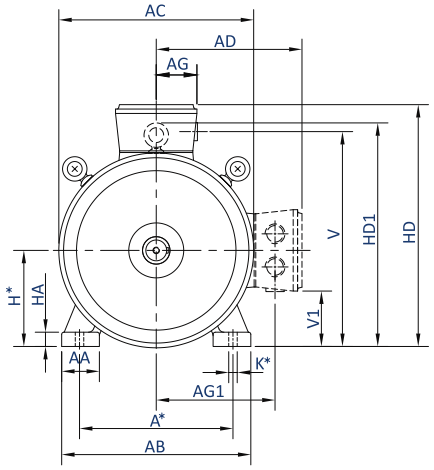
Insulation: Class F
Temperature Rise: Class B
Protection: IP55

Rated Output		Frame size	Type Reference	Operating characteristics at rated output									With DOL starting			Rotor GD²	Net Weight B3 constr.
				Rated Speed	Rated Current	Rated Torque	Power Factor			% Efficiency			Starting Current to Rated Current Ratio	Starting Torque to Rated Torque Ratio	Pullout Torque to Rated Torque Ratio		
kW	HP		B3 construction	RPM	Amps.	kg- m	FL	3/4L	1/2L	FL	3/4L	1/2L				kgm²	kg
0.37	0.5	80	2H08061300000	910	1.07	0.396	0.70	0.60	0.48	69.0	69.0	67.0	3.0	2.1	2.3	0.0060	10
0.55	0.75	80	2H08063300000	915	1.48	0.585	0.71	0.62	0.48	72.9	72.9	68.5	4.0	2.2	2.5	0.0084	11
0.75	1.0	90S	2H09S633AT000	920	1.90	0.790	0.72	0.61	0.50	75.9	75.9	72.3	4.0	2.0	2.5	0.0105	14
1.1	1.5	90L	2H09L653AT000	920	2.72	1.16	0.72	0.61	0.50	78.1	78.1	74.0	4.0	2.0	2.5	0.0155	17
1.5	2.0	100L	2H10L633AT000	935	3.63	1.56	0.72	0.62	0.52	79.8	79.8	76.0	4.5	2.0	2.5	0.0241	22
2.2	3.0	112M	2H11M653AT000	955	5.00	2.24	0.75	0.65	0.56	81.8	81.8	79.8	5.5	2.1	2.5	0.0609	32
3.70	5.00	132S	2H13S6G3AT000	960	7.83	3.75	0.78	0.73	0.60	84.30	84.30	83.50	5.50	2.00	2.50	0.1093	46
5.50	7.50	132M	2H13M6T3AT000	960	11.60	5.58	0.77	0.71	0.60	86.00	86.00	85.00	5.50	2.00	2.50	0.1518	59
7.5	10	160M	2H16M63300000	965	15.3	7.57	0.78	0.73	0.62	87.2	87.2	86.0	5.5	1.9	2.3	0.2170	97
9.3	12.5	160L	2H16L66300000	965	18.6	9.39	0.79	0.74	0.64	88.0	88.0	86.7	5.5	1.9	2.3	0.2890	115
11	15	160L	2H16L67300000	965	22.1	11.1	0.78	0.73	0.62	88.7	88.7	87.0	6.0	2.0	2.5	0.3190	120
15	20	180L	2H18L63300000	965	29.1	15.1	0.80	0.75	0.62	89.7	89.7	87.2	5.5	2.6	2.3	0.8200	200
18.5	25	200L	2H20L63300000	975	34.7	18.5	0.82	0.77	0.69	90.4	90.4	88.3	5.5	2.6	2.3	1.20	254
22	30	200L	2H20L65300000	975	41.1	22.0	0.82	0.77	0.69	90.9	90.9	88.8	6.0	2.6	2.3	1.37	270
30	40	225M	2H22M64300000	975	52.9	30.0	0.86	0.84	0.76	91.7	91.2	88.7	7.0	2.5	2.2	2.41	358
37	50	250M	2H25M63300000	980	63.4	36.8	0.88	0.85	0.82	92.2	92.2	91.0	6.0	2.5	2.3	3.72	528
45	60	280S	2H28S61300000	984	80.4	44.5	0.84	0.80	0.72	92.7	92.7	91.2	6.0	2.5	2.4	5.11	573
55	75	280M	2H28M63300000	984	95.6	54.4	0.86	0.83	0.76	93.1	93.1	91.0	6.0	2.4	2.4	6.16	620
75	100	315S	2H31S61300000	988	133	73.9	0.84	0.82	0.75	93.7	93.7	92.5	6.0	2.4	2.5	10.70	830
90	120	315M	2H31M63300000	989	159	88.6	0.84	0.80	0.74	94.0	94.0	92.9	6.0	2.2	2.5	12.40	912
110	150	315M	2H31M65300000	989	193	108	0.84	0.81	0.74	94.3	94.3	93.3	6.0	2.3	2.5	15.50	1010
125	170	315L	2H31L6A300000	990	222	123	0.83	0.80	0.72	94.4	94.2	93.0	6.0	2.3	2.5	18.00	1175
132	180	315L	2H31L67300000	990	231	130	0.84	0.81	0.74	94.6	94.6	93.8	6.0	2.3	2.5	18.00	1175
150	200	315L	2H31L6B300000	990	269	148	0.82	0.79	0.70	94.7	94.3	92.8	6.0	2.0	2.5	21.50	1231
160	215	315L	2H31L69300000	990	280	157	0.84	0.81	0.71	94.8	94.5	93.0	6.0	2.0	2.5	21.50	1231
180	240	355L	2H35L6A300000	990	322	177	0.82	0.77	0.65	94.9	94.6	93.3	6.0	2.0	2.5	28.70	1670
200	270	355L	2H35L61300000	990	349	197	0.84	0.80	0.7	95.0	94.7	93.5	6.0	2.0	2.5	28.70	1670
250	335	355L	2H35L63300000	990	436	246	0.84	0.80	0.7	95.0	94.7	93.4	6.0	2.0	2.5	35.50	1780

Note: All performance values are subject to tolerance as per IS/IEC 60034-1

DIMENSIONAL DRAWING: IE2 EFFICIENCY SERIES FOR SAFE AREA APPLICATION FOOT MOUNTED (B3) MOTORS



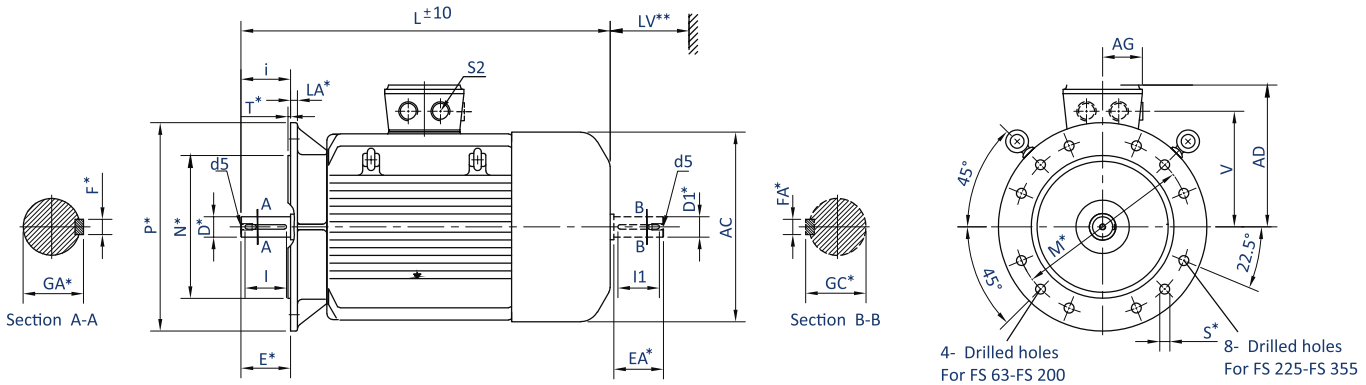


		FIXING						GENERAL												TERMINAL BOX						SHAFT					
IEC Fr. Size	Pole	A*	B*	B1*	C*	H*	K*	AB	BB	AA	BA	BA1	BC	HA	HC	HD	AD	L	LV**	AC	V	AG	HD1	V1	AG1	S2 BSC	D* DA*	E* EA*	F* FA*	GA* GC*	I I1	d5
63	2&4	100	80	—	40	63	7	126	100	28	30	—	10	7	125	179	—	206	30	124	149	40	—	—	—	1x3/4"	11	23	4	12.5	18	M4
71	2,4&6	112	90	—	45	71	7	135	110	31	30	—	10	7	141	195	—	234	30	140	166	40	—	—	—	1x3/4"	14	30	5	16	25	M5
80	2,4&6	125	100	—	50	80	10	150	124	31	35	—	12	9	159	214	—	267	30	157	185	40	—	—	—	1x3/4"	19	40	6	21.5	35	M6
90S	2&6	140	100	—	56	90	10	168	125	34	31.5	—	13	12	177	230	—	302	35	174	199	52	—	—	—	2x3/4"	24	50	8	27	45	M8
	4																	336													
90L	2&6		125						150									327													
	4																	361													
100L	2,4&6	160	140	—	63	100	12	190	174	43.5	36	—	17	12	198	257	—	366	40	195	225	56	—	—	—	2x1"	28	60	8	31	55	M10
112M	4&6	190	140	—	70	112	12	220	174	47	36	—	17	12	222	282	—	388	45	220	246	56	—	—	—	2x1"	28	60	8	31	55	M10
132S	2(7.5kW)	216	140	—	89	132	12	256	180	54	50	—	20	16	262	328	—	518	50	260	291	63	—	—	—	2x1"	38	80	10	41	70	M12
	2&4																	475													
	6																	459													
132M	4		178						218		54							513													
	6																	497													
160M	2(15kW)	254	210	—	108	160	15	310	250	58	70	—	20	20	318	383	220	635	60	316	346	63	366	98	186	2x1"	42	110	12	45	105	M16
	2																	605													
	4&6																	585													
160L	2&4		254						294									679													
	6																	629													
180M#	2	279	241	—	121	180	15	344	281	65	70	—	20	26	357	—	271	679	70	354	—	—	412	83	216	2x1 1/2"	48	110	14	51.5	100	M16
	4																	698													
180L#	4		279						319									737													
	6																	717													
200L	2	318	305	—	133	200	19	398	355	85	85	—	25	32	397	—	319	795	80	394	—	—	466	—	249	2x2"	55	110	16	59	100	M20
	4&6																	772													
225S	4	356	286	—	149	225	19	436	336	85	85	—	25	34	450	—	343	852	90	445	—	—	509	—	275	2x2"	60	140	18	64	130	M20
225M	2		311						361									837									55	110	16	59	100	
	4																	877									60	140	18	64	130	
	6																	857													
250M	2	406	349	—	168	250	24	506	425	100	115	—	46	42	495	665	—	993	100	489	578	243	—	—	—	2x2"	60	140	18	64	130	M20
	4&6																	914									65	140	18	69	130	
280S/M	2	457	368	419	190	280	24	540	490	100	110	149	37	42	552	725	—	1010	115	544	638	243	—	—	—	2x 2"	65	140	18	69	130	M20
	4&6																										75	140	20	79.5	130	
315S/M	2	508	406	457	216	315	28	605	540	120	120	155	43	45	617	834	—	1175	130	604	728	278	—	—	—	2x2"	65	140	18	69	130	M20
	4&6																	1167									80	170	22	85	160	
315L	2		508	—					593			—					—	1342								2x2 1/2"	65	140	18	69	130	
	4&6																	1332									90	170	25	95	160	M24
355L	2	610	630	—	254	355	28	710	770	110	170	—	70	45	703	939	—	1461	145	695	850	403	—	—	—	2x3"	75	140	20	79.5	130	M20
	4&6																	1491									95	170	25	100	160	M24

Notes: * This is a mandatory dimension for all standard motors
**Minimum distance for efficient cooling of motor to be maintained by user
For 180 Frame/4Pole, dimensions DA=42, FA=12, GC=45; All other dimensions will remain as mentioned in the table
1. All dimensions are in mm unless otherwise specified
2. Tolerances on mandatory dimensions are as per IS: 1231
3. For non standard motors, dimensions may change. Please contact our nearest sales office for details

Notes: 1. Eyebolt is not provided in motors of 63 to 90 frame
2. TB Position: To be read as: when viewed from DE side / when viewed parallel to shaft / Cable Entry
(a) Frame 63 & 71; 160 Frame, 4 Pole: Top / Center of body / RHS when viewed from DE side
(b) 80 to 132 Frame & 250 to 355 Frame: Top / Towards Drive End / RHS when viewed from DE side
(c) 160 Frame, 2 & 6 Pole; 180 Frame: RHS / Center of Body / Downward Side
(d) 200 to 225 Frame: RHS / Center of Body / NDE Side

DIMENSIONAL DRAWING: IE2 EFFICIENCY SERIES FOR SAFE AREA APPLICATION FLANGE MOUNTED (B5) MOTORS

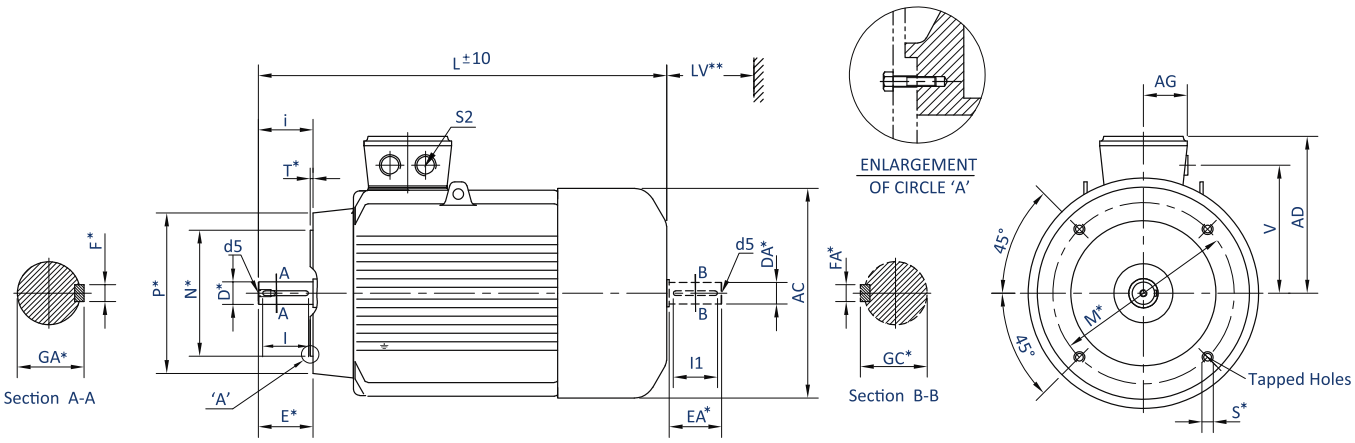


		FIXING					GENERAL						TERMINAL BOX			SHAFT					
IEC Fr. Size	Pole	P*	N*	M*	i	S*	T*	LA*	AD	L	LV**	AC	V	AG	S2 BSC	D* DA*	E* EA*	F* FA*	GA* GC*	I I1	d5
63	2&4	140	95	115	23	10	3	9	116	225	30	124	86	40	1x3/4"	11	23	4	12.5	18	M4
71	2,4&6	160	110	130	30	10	3.5	9	124	261	30	140	95	40	1x3/4"	14	30	5	16	25	M5
80	2,4&6	200	130	165	40	12	3.5	10	134	267	30	157	105	40	1x3/4"	19	40	6	21.5	35	M6
90S	2&6	200	130	165	50	12	3.5	10	140	302	35	174	109	52	2x3/4"	24	50	8	27	45	M8
	4									336											
90L	2&6									327											
	4									361											
100L	2,4&6	250	180	215	60	15	4	11	157	366	40	195	125	56	2x1"	28	60	8	31	55	M10
112M	4&6	250	180	215	60	15	4	11	170	388	45	220	134	56	2x1"	28	60	8	31	55	M10
132S	2(7.5kW)	300	230	265	80	15	4	12	196	518	50	260	159	63	2x1"	38	80	10	41	70	M12
	2&4									475											
	6									459											
132M	4									513											
	6									497											
160M	2(15kW)	350	250	300	110	19	5	13	220	635	60	316	186	63	2x1"	42	110	12	45	105	M16
	2									605											
	4&6									585											
160L	2&4									679											
	6									629											
180M#	2	350	250	300	110	19	5	13	271	679	70	354	216	97	2x1 1/2"	48	110	14	51.5	100	M16
	4									698											
180L#	4									737											
	6									717											
200L	2	400	300	350	110	19	5	15	319	795	80	394	250	158	2x2"	55	110	16	59	100	M20
	4&6									772											
225S	4	450	350	400	140	19	5	16	343	852	90	445	275	158	2x2"	60	140	18	64	130	M20
225M	2				110					837						55	110	16	59	100	
	4				140					877						60	140	18	64	130	
	6									857											
250M	2	550	450	500	140	19	5	18	415	993	100	489	328	243	2x2"	60	140	18	64	130	M20
	4&6									914						65	140	18	69	130	
280S/M	2	550	450	500	140	19	5	18	445	1010	115	544	358	243	2x2"	65	140	18	69	130	M20
	4&6															75	140	20	79.5	130	
315S/M	2	660	550	600	140	24	6	22	519	1175	130	604	413	278	2x2"	65	140	18	69	130	M20
	4&6				170					1167						80	170	22	85	160	
315L	2				140					1342					2x2 1/2"	65	140	18	69	130	
	4&6				170					1332						90	170	25	95	160	M24
355L	2	800	680	740	140	24	6	25	584	1461	145	695	495	403	2x3"	75	140	20	79.5	130	M20
	4&6				170					1491						95	170	25	100	160	M24

Notes: * This is a mandatory dimension for all standard motors
**Minimum distance for efficient cooling of motor to be maintained by user
For 180 Frame/4Pole, dimensions DA=42, FA=12, GC=45 ; All other dimensions will remain as mentioned in the table.
1. All dimensiones are in mm unless otherwise specified
2. Tolerances on mandatory dimensions are as per IS: 2223
3. For non standard motors, dimensions may change. Please contact our nearest sales office for details

Notes: 1. Eyebolt is not provided from 63 to 90 frame
2. TB Position: To be read as: when viewed parallel to shaft / Cable Entry
(a) Frame 63 & 71; 160 to 180 Frame: Center of body / RHS when viewed from DE side & TB is at Top
(b) 80 to 132 Frame & 250 to 355 Frame: Towards Drive End / RHS when viewed from DE side & TB is at Top
(c) 200 to 225 Frame: Center of Body / NDE Side

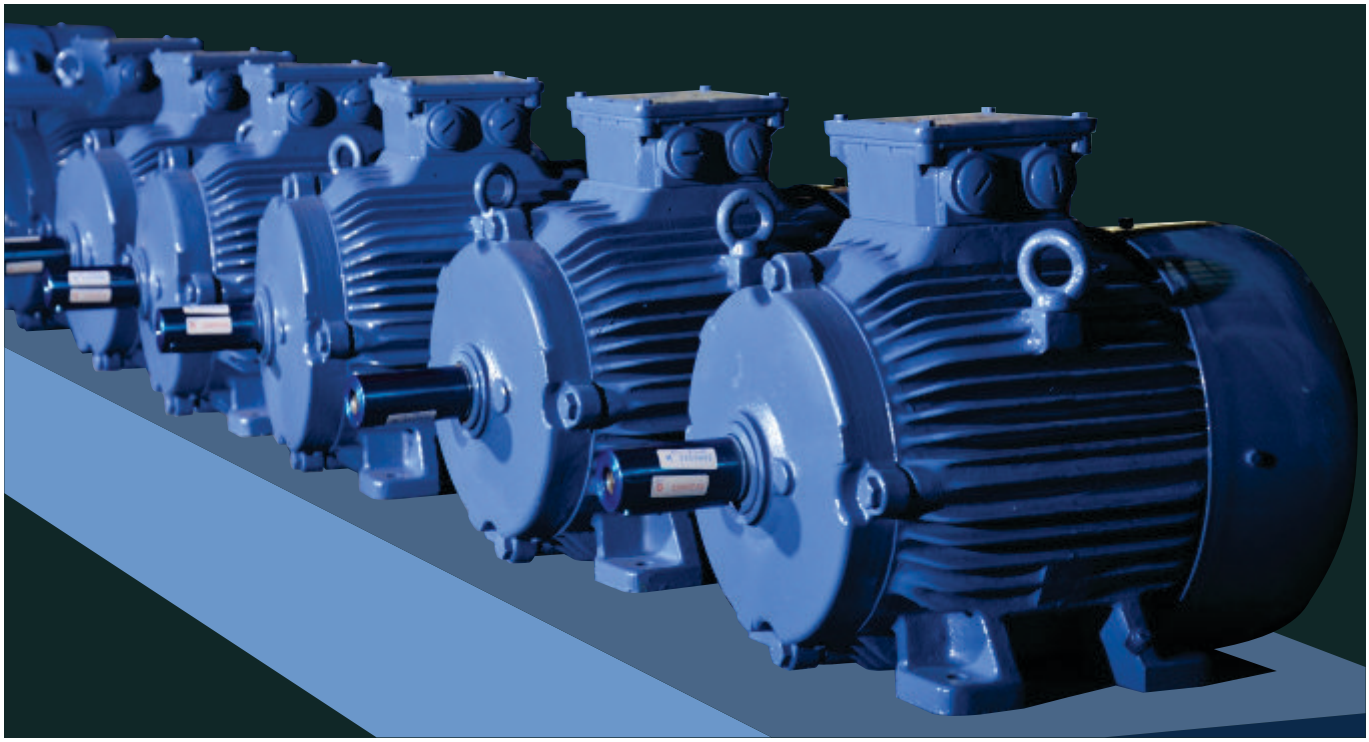
DIMENSIONAL DRAWING: IE2 EFFICIENCY SERIES FOR SAFE AREA APPLICATION FACE MOUNTED (B14) MOTORS



		FIXING					GENERAL					TERMINAL BOX			SHAFT					
IEC Fr. Size	Pole	P*	N*	M*	i	S*	T*	AD	L	LV**	AC	V	AG	S2 BSC	D* DA*	E* EA*	F* FA*	GA* GC*	I I1	d5
63	2&4	90	60	75	23	M5X10	2.5	116	206	30	124	86	40	1x3/4"	11	23	4	12.5	18	M4
71	2,4&6	105	70	85	30	M6X10	2.5	124	234	30	140	95	40	1x3/4"	14	30	5	16	25	M5
80	2,4&6	120	80	100	40	M6X13	3	134	267	30	157	105	40	1x3/4"	19	40	6	21.5	35	M6
90S	2&6	140	95	115	50	M8X12	3	140	302	35	174	109	52	2x3/4"	24	50	8	27	45	M8
	4								336											
90L	2&6								327											
	4								361											
100L	2,4&6	160	110	130	60	M8X12	3.5	157	366	40	195	125	56	2x1"	28	60	8	31	55	M10
112M	4&6	160	110	130	60	M8X12	3.5	170	388	45	220	134	56	2x1"	28	60	8	31	55	M10

Notes: * This is a mandatory dimension for all standard motors
**Minimum distance for efficient cooling of motor to be maintained by user
1. All dimensions are in mm unless otherwise specified
2. Tolerances on mandatory dimensions are as per IS: 2223
3. For non standard motors, dimensions may change. Please contact our nearest sales office for details

Notes: 1. Eyebolt is not provided from 63 to 90 frame
2. For the dimensional drawing of 132 frame, B14 mounting kindly contact our nearest sales office
3. TB Position: To be read as: when viewed parallel to shaft / Cable Entry
(a) 63, 71, 160 & 180 Frame: Center of body / RHS when viewed from DE side & TB is at Top
(b) 80 to 132 Frame & 250 to 355 Frame: Towards Drive End / RHS when viewed from DE side & TB is at Top



In the past few decades, India has witnessed significant economic growth due to liberalization and industrialization. The contribution of industries and services towards the Indian economy (GDP) has been increasing over a period of time. However, this is accompanied by an increase in energy demand, most of which is obtained through conventional sources of energy, which today contributes to 82% of the total power produced in our country. This ever-increasing demand leads to increase in all other aspects associated with it, which include air pollution and emission of greenhouse gases due to burning of fossil fuels (non-renewable source of energy). In view of this situation, it becomes imperative to explore new and viable solutions to save energy. This includes usage of energy efficient equipment especially in industries, as it accounts for over half the consumption of electricity and 60 to 70% of which is utilized by electric motors.

The operating cost of an electric motor is about 95% of the total cost incurred during its lifecycle that ranges between 15 to 20 years. Organizations which have proactively invested in energy efficient motors have reaped the benefits of better output, increased cost savings or both.

Bharat Bijlee has been a fore runner in energy efficiency. With a strong in-house design team, indigenous and state of the art manufacturing facility equipped with a SCADA controlled test bed, we have successfully developed a wide range of premium efficiency IE3 series motors. Over the years, Bharat Bijlee has gained the trust of its customers and with the ability to deliver beyond customers' expectations, this trust has only grown stronger. Known for its product and service quality, there is more to what makes Bharat Bijlee a preferred brand across the country.

Our IE3 motors have been successfully working across all sectors and in all possible applications over the years and have exceeded expectations of performance and reliability. Owing to this, Bharat Bijlee is one of the most trusted brands in the country today.

Why Bharat Bijlee?

- Motors suited for all applications across all sectors
- The most suitable solutions to extremely harsh and severe applications
- Customized motors designed and manufactured to suit application specific needs
- Motors conform to relevant IS/IEC standards

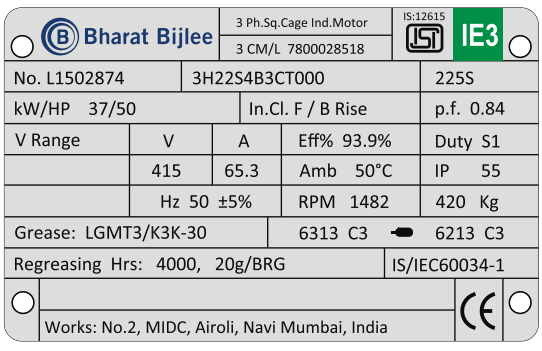
A MOTOR FOR EVERY NEED

REFERENCE STANDARDS

IS/IEC 60034-1	Three Phase Induction motor specifications (“Rotating Electrical Machines - Part 1: Rating & Performance”)
IS : 900	Code of practice for installation & maintenance of induction motors
IS : 1231	Dimensions of foot mounted A.C induction motors
IS : 2223	Dimensions of flange mounted A.C induction motors
IS : 4029	Guide for testing three phase induction motors (For Standard TEFC SCR Motors)
IS : 4889	Methods of determination of efficiency of rotating electric machines (For Standard TEFC SCR Motors)
IS/IEC 60034-5	Degree of protection provided by the integral design of Rotating Electrical Machines (IP code classification)
IS : 6362/IEC 60034-6	Designation of method of cooling for Rotating Electrical Machines / Method of cooling (IC code)
IS:12065/IEC 60034-9	Permissible limits of noise level for Rotating Electric Machines
IS : 12075	Mechanical Vibration of Rotating Electrical Machines
IS : 12615	Energy Efficient Induction Motors Three Phase Squirrel Cage
IEC 60034-30	Rotating Electrical Machines - Efficiency classes of line operated AC motors (IE code)
IEC 60072-1	Dimension & Output rating of Rotating Electrical machines
IS : 15999 (Part 2 /Sec 1)	Standard Methods for determining Losses and Efficiency from Tests (For IE Series Motors)

BEARING CHART

Fr. Size	Bearing Nos.	
	D.E.	N.D.E.
80	6004 2Z	6004 2Z
90 S & L	6205 2Z	6205 2Z
100L	6206 2Z	6205 2Z
112M	6206 2Z	6205 2Z
132 S / M	6208 2Z	6208 2Z
160 M/L	6309 2Z	6209 2Z
180 M/L 4P	6310 2Z	6309 2Z
180 M/L (2, 6, 8 Pole)	6310 2Z	6210 2Z
200 L	6312 2Z	6212 2Z
225 S/M	6313	6213
250M	6315	6215
280S/M (2 Pole)	6316	6316
280S/M (4, 6, 8 Pole)	6317	6316
315S/M & L	6319	6319
355L	6322	6322



SCADA Test Facility

ADVANTAGES OF BHARAT BIJLEE PREMIUM EFFICIENCY IE3 MOTOR

- Higher efficiency
- Optimized ventilation system for cooler operation and reduced noise
- Reduced life cycle cost
- Highly reliable under most demanding conditions
- Short payback period
- Carbon Credits
- Inverter grade winding
- A sustainable future

The operating cost of a motor accounts for major expenditure during its life cycle. Opting for premium efficient motors allows the user to realize energy cost savings in a reasonably short time span.

Comparison of IE2 v/s IE3 motor for 2.2 kW & 22 kW is depicted in the table below clearly showing:

- Annual energy saving for one motor
- Payback period
- Total savings over the lifespan of one motor

Aspect	Energy Savings Observed in 2.2 kW / 4Pole motor		Energy Savings Observed in 22 kW / 4Pole motor	
	IE3	IE2	IE3	IE2
kW Rating	2.2	2.2	22	22
Purchase Cost of Motor (INR)	10696	9352	62892	54821
Motor Efficiency	86.70%	84.30%	93.00%	91.60%
Per Hour kW Consumption	2.54	2.61	23.66	24.02
Annual running Hours: 300 Days X 16 Hrs	4800	4800	4800	4800
Power Consumption/Annum (kW)	12180	12527	113548	115284
Average energy cost (INR/kWH)	7	7	7	7
Average energy cost /annum (INR)	85260	87687	794839	806987
Annual Saving when IE3 motor is used (INR)	2,427		12,148	
Motor Cost Differential (INR)	1,344		8071	
Payback Period for differential amount (Months)	7		8	
Saving Over 20 year Life (INR)	48,546		2,42,964	

For 20 motors each of 2.2 & 22 kW, the savings shall be Rs.10 & 50 lakhs respectively thus totaling to 60 lakhs during the motors' lifespan of 20 years.

GENERAL TECHNICAL SPECIFICATIONS

Range

- **Series:** IE3 Safe Area Motors
- **kW Rating:** 0.55 to 355
- **Frame:** 80 to 355
- **Polarity:** 2, 4, 6, 8

Standard Feature	Optional Feature
Voltage: 415V	Any other voltage on request
Frequency: 50 Hz	60 Hz
IP55	IP56, IP65, IP66
B3 Mounting	B5, B35, B14 (upto 132 Frame)
Ambient: 50°C	Any other on request
TB Position : Top	Any other on request
Aluminium Construction: 90 to 132 Frame Cast Iron Construction: 80 Frame, 160 Frame & Above	Cast Iron construction: 90 to 132 Frame
Insulation: Class F	Insulation: Class H
IC411: Totally Enclosed Fan Cooled	IC410: Natural Ventilation IC416: Forced Cooling for 132 Frame & above
Sealed Bearing: upto 200 Frame Online Greasing Arrangement: 225 Frame & Above	Online Greasing Arrangement: 160 to 200 Frame
Paint Shade: Acrylic base, RAL5000	Any other shade or material on request
Fan Cover: Steel	
Thermal Protection in DCCA** Motors: 3 nos. simplex RTD	Simplex & duplex RTD: 250 Frame & Above BTD: 250 Frame & above Thermister: 80 Frame & Above
Space Heater for DCCA Motors	Space Heater: 90 Frame & Above
Inverter Duty Application for all frames	
Packing: Thermocol / Corrugated Boxes: Upto 132 Frame Packing: Wooden Packing Boxes: 160 Frame & Above	Wooden Pallets Sea Worthy / Export Packing Case
For standard bearings, kindly refer to the bearing chart	Insulated Bearing: 160 Frame & Above / Hybrid Bearing: 132 to 225 Frame Cylindrical Roller Bearing on DE Side: 160 Frame & Above

Our other optional features:

- Space heater for 90 frame & above
- Non standard shaft material, diameter & extension
- Front bearing locking arrangement
- SS Hardware, canopy, water flinger, non standard paint & paint shade, cable gland
- Provision for hollow shaft encoder mounting
- High temperature grease
- Reduced & special grades of vibration as per IS 12075 can be provided on request

** Please confirm with our nearest sales office

LV MOTORS: IE3 SAFE AREA

Performance Data : IE3 Efficiency Series for Safe Area Application

Applicable standard for testing & efficiency determination : IS15999
Voltage: 415V +/- 10%
Frequency: 50Hz +/- 5%
Combined Variation: +/- 10%

Ambient: 50°C
Duty: S1 (Continuous)
3000 rpm (2 Pole)

Insulation: Class F
Temperature Rise: Class B
Protection: IP55

Rated Output		Frame size	Type Reference	Operating characteristics at rated output									With DOL starting			Rotor GD²	Net Weight B3 constr.
				Rated Speed	Rated Current	Rated Torque	Power Factor			% Efficiency			Starting Current to Rated Current Ratio	Starting Torque to Rated Torque Ratio	Pullout Torque to Rated Torque Ratio		
kW	HP		B3 construction	RPM	Amps.	kg- m	FL	3/4L	1/2L	FL	3/4L	1/2L				kgm²	kg
0.75	1.0	80	3H0802B3CT000	2840	1.54	0.257	0.84	0.80	0.68	80.7	80.7	78.0	6.0	3.0	3.5	0.0091	17
1.1	1.50	80	3H0802E3CT000	2840	2.20	0.377	0.84	0.80	0.68	82.7	82.7	80.0	6.0	3.0	3.5	0.0113	18
1.5	2.0	90S	3H09S2B3AT000	2850	2.88	0.510	0.86	0.81	0.72	84.2	84.2	84.2	6.5	2.8	3.0	0.0066	18
2.2	3.0	90L	3H09L2E3AT000	2850	4.14	0.75	0.86	0.80	0.71	85.9	85.9	85.5	6.5	3.0	3.3	0.0084	21
3.7	5.0	100L	3H10L2B3AT000	2890	6.74	1.25	0.87	0.82	0.73	87.8	87.8	87.3	7.0	3.0	3.1	0.0158	26
5.5	7.5	132S	3H13S2C3AT000	2935	9.53	1.83	0.90	0.87	0.81	89.2	89.2	87.5	7.0	2.3	3.0	0.0878	62
7.50	10.00	132S	3H13S2H3AT000	2935	12.90	2.49	0.90	0.87	0.81	90.10	90.10	88.70	7.00	2.30	3.00	0.0936	65
9.30	12.50	160M	3H16M2B3CT000	2945	16.59	3.08	0.86	0.83	0.76	90.70	90.70	88.70	6.50	2.50	3.00	0.1900	120
11	15	160M	3H16M2E3CT000	2945	19.5	3.64	0.86	0.83	0.76	91.2	91.2	89.2	6.5	2.5	3.0	0.2200	127
15	20.0	160M	3H16M2H3CT000	2945	26.1	4.96	0.87	0.84	0.77	91.9	91.9	90.0	6.5	2.5	3.0	0.3000	144
18.5	25	160L	3H16L2M3CT000	2945	31.7	6.1	0.88	0.86	0.79	92.4	92.4	90.8	6.5	2.5	3.0	0.3740	161
22	30	180M	3H18M2B3CT000	2960	37.5	7.2	0.88	0.84	0.78	92.7	92.7	91.0	6.5	2.6	3.0	0.5000	192
30	40	200L	3H20L2B3CT000	2970	51.4	9.8	0.87	0.85	0.79	93.3	93.3	91.5	6.5	2.2	2.8	0.91	306
37	50	200L	3H20L2E3CT000	2970	63.1	12.1	0.87	0.85	0.79	93.7	93.7	92.0	6.5	2.2	2.8	1.13	315
45	60	225M	3H22M2B3CT000	2970	74.0	14.8	0.90	0.88	0.82	94.0	94.0	93.0	6.6	2.1	2.7	2.11	475
55	75	250M	3H25M2E3CT000	2970	91.2	18.0	0.89	0.86	0.80	94.3	94.3	93.0	6.5	2.4	2.8	2.60	550
75	100	280S	3H28S2E3CT000	2970	121.1	24.6	0.91	0.89	0.86	94.7	94.7	92.7	7.0	2.0	2.7	3.08	675
90	120	280M	3H28M2H3CT000	2970	144.8	29.5	0.91	0.89	0.86	95.0	95.0	93.0	7.0	2.0	2.7	3.69	760
110	150	315S	3H31S2E3CT000	2982	179	35.9	0.90	0.86	0.80	95.2	94.6	93.0	7.0	2.2	2.5	5.00	940
132	180	315L	3H31L2H3CT000	2982	214	43.1	0.90	0.86	0.80	95.4	94.8	93.2	7.0	2.2	2.5	6.20	1100
150	200	315L	3H31L2A3CT000	2982	246	49	0.89	0.85	0.80	95.5	94.9	93.5	7.0	2.2	2.5	7.70	1390
160	215	315L	3H31L2M3CT000	2982	262	52	0.89	0.85	0.80	95.6	95.0	93.6	7.0	2.2	2.5	7.70	1390
180	240	355L	3H35L2A3CT000	2987	284	59	0.92	0.89	0.86	95.7	95.7	93.7	7.0	1.8	2.4	12.00	1680
200	270	355L	3H35L2B3CT000	2988	316	65	0.92	0.89	0.84	95.8	95.8	93.8	7.0	2.0	2.5	12.00	1680
225	335	355L	3H35L2C3CT000	2987	355	73	0.92	0.89	0.84	95.8	95.8	93.8	6.5	1.8	2.4	12.00	1680
250	335	355L	3H35L2E3CT000	2988	395	81	0.92	0.90	0.86	95.8	95.8	93.8	7.0	2.0	2.5	14.70	1870
280	375	355L	3H35L2G3CT000	2987	442	91	0.92	0.90	0.86	95.8	95.8	93.8	6.5	1.8	2.4	14.70	1870

Note: All performance values are subject to tolerance as per IS/IEC 60034-1

LV MOTORS: IE3 SAFE AREA

Performance Data : IE3 Efficiency Series for Safe Area Application

Applicable standard for testing & efficiency determination : IS15999
Voltage: 415V +/- 10%
Frequency: 50Hz +/- 5%
Combined Variation: +/- 10%

Ambient: 50°C
Duty: S1 (Continuous)
1500 rpm (4 Pole)

Insulation: Class F
Temperature Rise: Class B
Protection: IP55

Rated Output		Frame size	Type Reference	Operating characteristics at rated output									With DOL starting			Rotor GD²	Net Weight B3 constr.
				Rated Speed	Rated Current	Rated Torque	Power Factor			% Efficiency			Starting Current to Rated Current Ratio	Starting Torque to Rated Torque Ratio	Pullout Torque to Rated Torque Ratio		
kW	HP		B3 construction	RPM	Amps.	kg- m	FL	3/4L	1/2L	FL	3/4L	1/2L				kgm²	kg
0.55	0.8	80	3H0804B3CT000	1425	1.26	0.376	0.78	0.74	0.60	78.0	78.0	77.0	5.0	2.2	2.8	0.0110	17
0.75	1.00	80	3H0804E3CT000	1430	1.62	0.511	0.78	0.74	0.60	82.5	82.5	82.5	5.0	2.6	2.8	0.0150	19
1.1	1.5	90S	3H09S4B3AT000	1425	2.33	0.750	0.78	0.70	0.55	84.1	84.1	82.5	5.5	2.5	2.7	0.0121	17
1.5	2.0	90L	3H09L4E3AT000	1425	3.14	1.03	0.78	0.70	0.55	85.3	85.3	84.5	6.0	2.5	2.7	0.0149	20
2.2	3.0	100L	3H10L4B3AT000	1435	4.53	1.49	0.78	0.72	0.60	86.7	86.7	85.8	6.0	2.5	3.0	0.0245	26
3.7	5.0	112M	3H11M4B3AT000	1455	7.37	2.48	0.79	0.74	0.60	88.4	88.4	86.5	6.5	3.0	3.5	0.0588	37
5.50	7.50	132S	3H13S4C3AT000	1455	10.30	3.68	0.83	0.78	0.66	89.60	89.60	88.40	6.50	2.50	3.00	0.1173	52
7.50	10.00	132M	3H13M4H3AT000	1455	13.90	5.02	0.83	0.78	0.66	90.40	90.40	89.40	6.50	2.50	3.30	0.1570	70
9.3	12.5	160M	3H16M4E3CT000	1470	17.3	6.16	0.82	0.77	0.68	91.0	91.0	90.0	6.5	2.7	3.2	0.3400	124
11	15.0	160M	3H16M4H3CT000	1470	20.4	7.29	0.82	0.77	0.68	91.4	91.4	90.8	6.5	2.7	3.2	0.3750	135
15	20	160L	3H16L4M3CT000	1470	27.3	9.9	0.83	0.78	0.70	92.1	92.1	91.1	6.5	2.7	3.2	0.5200	153
18.5	25	180M	3H18M4B3CT000	1470	31.9	12.3	0.87	0.84	0.76	92.6	92.6	92.0	6.5	2.5	3.0	0.7500	200
22	30	180L	3H18L4E3CT000	1470	37.8	14.6	0.87	0.84	0.76	93.0	93.0	92.5	6.5	2.5	3.0	0.86	220
30	40	200L	3H20L4B3CT000	1475	51.3	19.8	0.87	0.84	0.77	93.6	93.6	91.5	6.5	2.6	3.0	1.38	295
37	50	225S	3H22S4B3CT000	1482	66.0	24.3	0.83	0.80	0.74	93.9	93.9	93.4	6.0	2.0	2.6	2.30	400
45	60	225M	3H22M4E3CT000	1482	80.1	29.6	0.83	0.80	0.74	94.2	94.2	93.6	6.0	2.0	2.6	2.83	430
55	75	250M	3H25M4B3CT000	1480	96.3	36.2	0.84	0.80	0.72	94.6	94.6	93.8	6.0	2.0	2.6	3.06	500
75	100	280S	3H28S4B3CT000	1485	127.7	49.2	0.86	0.82	0.74	95.0	95.0	94.5	6.5	2.5	3.0	5.53	670
90	120	280M	3H28M4H3CT000	1485	153	59.0	0.86	0.82	0.74	95.2	95.2	95.0	6.5	2.5	3.0	6.36	735
110	150	315S	3H31S4G3CT000	1488	189	72.0	0.85	0.82	0.74	95.4	95.4	93.9	6.8	2.5	3.0	11.70	965
132	180	315M	3H31M4K3CT000	1488	226	86	0.85	0.82	0.74	95.6	95.6	94.1	6.8	2.5	3.0	14.00	1115
160	215	315L	3H31L4P3CT000	1490	277	105	0.84	0.80	0.72	95.8	95.8	94.5	6.6	2.5	3.0	15.60	1225
180	240	315L	3H31L4T3CT000	1491	311	118	0.84	0.80	0.72	95.9	95.9	94.6	6.6	2.7	3.0	17.80	1290
200	270	315L	3H31L4W3CT000	1491	345	131	0.84	0.80	0.72	96.0	96.0	95.0	6.6	2.7	3.0	17.80	1290
225	300	355L	3H35L4B3CT000	1490	375	147	0.87	0.83	0.72	96.0	96.0	95.0	6.0	1.7	2.4	23.30	1680
250	335	355L	3H35L4E3CT000	1492	416	163	0.87	0.83	0.72	96	96	95.0	6.5	1.8	2.4	32.70	1855
315	422	355L	3H35L4H3CT000	1492	525	206	0.87	0.83	0.72	96.0	96	95.0	6.5	1.8	2.4	37.90	2025

Note: All performance values are subject to tolerance as per IS/IEC 60034-1

LV MOTORS: IE3 SAFE AREA

Performance Data: IE3 Efficiency Series for Safe Area Application

Applicable standard for testing & efficiency determination : IS15999
Voltage: 415V +/- 10%
Frequency: 50Hz +/- 5%
Combined Variation: +/- 10%

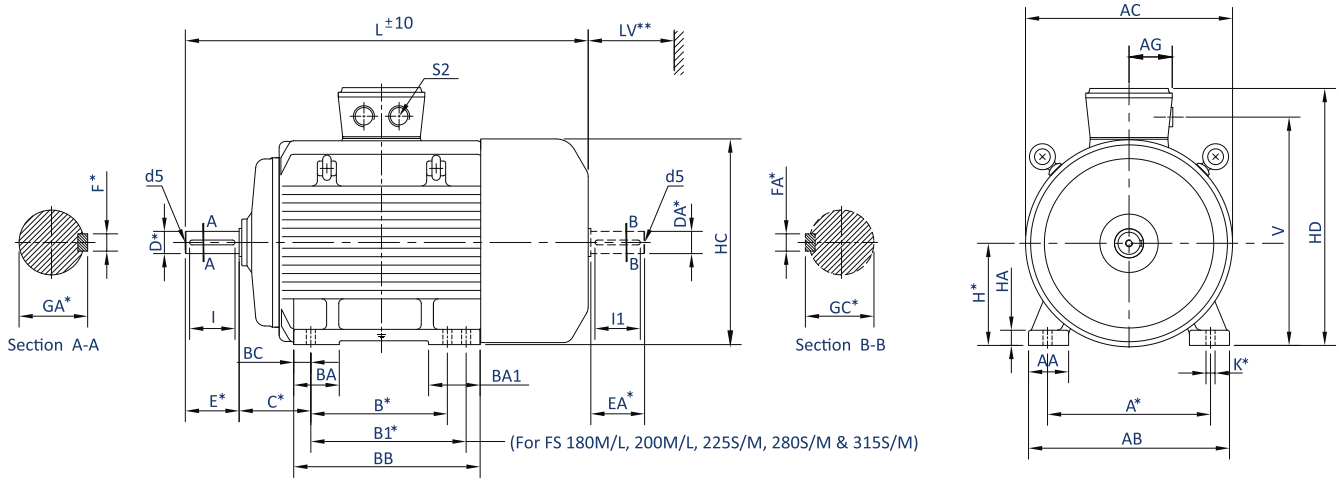
Ambient: 50°C
Duty: S1 (Continuous)
1000 rpm (6 Pole)

Insulation: Class F
Temperature Rise: Class B
Protection: IP55

Rated Output		Frame size	Type Reference	Operating characteristics at rated output									With DOL starting			Rotor GD²	Net Weight B3 constr.
				Rated Speed	Rated Current	Rated Torque	Power Factor			% Efficiency			Starting Current to Rated Current Ratio	Starting Torque to Rated Torque Ratio	Pullout Torque to Rated Torque Ratio		
kW	HP		B3 construction	RPM	Amps.	kg- m	FL	3/4L	1/2L	FL	3/4L	1/2L				kgm²	kg
0.75	1.0	90S	3H09S6B3AT000	945	1.84	0.773	0.72	0.62	0.52	78.9	78.9	78.9	4.0	2.1	2.5	0.0174	25
1.1	1.50	90L	3H09L6E3AT000	945	2.62	1.134	0.72	0.62	0.52	81.0	81.0	81.0	4.0	2.1	2.5	0.0250	27
1.5	2.0	100L	3H10L6B3AT000	935	3.51	1.560	0.72	0.62	0.54	82.5	82.5	81.0	4.5	2.3	2.5	0.0275	24
2.2	3.0	112M	3H11M6B3AT000	960	4.84	2.23	0.75	0.68	0.55	84.3	84.3	81.0	6.0	2.3	2.5	0.0691	36
3.7	5.0	132S	3H13S6C3AT000	960	7.83	3.75	0.76	0.70	0.58	86.5	86.5	86.0	5.5	2.2	2.6	0.1210	50
5.5	7.5	132M	3H13M6H3AT000	965	11.30	5.55	0.77	0.70	0.60	88.0	88.0	87.5	5.5	2.2	2.6	0.1800	70
7.50	10.00	160M	3H16M6B3CT000	970	14.64	7.53	0.80	0.76	0.68	89.10	89.10	89.10	5.50	2.50	3.00	0.4500	125
9.30	12.50	160L	3H16L6E3CT000	975	18.01	9.29	0.80	0.76	0.68	89.80	89.80	89.80	5.50	2.50	3.00	0.5600	138
11	15	160L	3H16L6H3CT000	975	21.2	10.99	0.80	0.76	0.68	90.3	90.3	90.3	5.5	2.5	3.0	0.6460	145
15	20.0	180L	3H18L6B3CT000	977	27.6	14.95	0.83	0.78	0.72	91.2	91.2	91.2	5.5	2.5	3.0	1.2000	210
18.5	25	200L	3H20L6B3CT000	977	32.3	18.4	0.87	0.83	0.75	91.7	91.7	91.5	6.5	2.6	3.2	1.8100	295
22	30	200L	3H20L6E3CT000	977	37.7	21.9	0.88	0.85	0.76	92.2	92.2	92.2	6.5	2.6	3.2	2.1000	302
30	40	225M	3H22M6B3CT000	984	51.1	29.7	0.88	0.84	0.77	92.9	92.9	92.5	6.5	3.0	3.5	3.51	410
37	50	250M	3H25M6B3CT000	982	62.0	36.7	0.89	0.86	0.79	93.3	93.3	92.8	6.5	2.8	3.2	3.72	528
45	60	280S	3H28S6B3CT000	984	78.6	44.5	0.85	0.80	0.72	93.7	93.7	92.9	6.0	2.6	3.2	5.11	573
55	75	280M	3H28M6E3CT000	984	93.5	54.4	0.87	0.84	0.78	94.1	94.1	93.2	6.0	2.6	3.2	6.16	620
75	100	315S	3H31S6B3CT000	992	129.8	73.6	0.85	0.82	0.72	94.6	94.6	93.6	6.0	2.5	3.0	10.70	830
90	120	315M	3H31M6E3CT000	992	155.2	88.4	0.85	0.82	0.72	94.9	94.9	93.9	6.0	2.5	3.0	12.40	912
110	150	315M	3H31M6H3CT000	992	189	108.0	0.85	0.82	0.72	95.1	95.1	94.2	6.0	2.5	3.0	15.50	1010
132	180	315L	3H31L6M3CT000	992	229	129.6	0.84	0.80	0.72	95.4	95.4	94.4	6.0	2.5	3.0	18.00	1175
160	215	355L	3H35L6B3CT000	990	277	157	0.84	0.81	0.71	95.6	95.6	93.0	6.0	2.0	2.5	28.70	1670
180	240	355L	3H35L6C3CT000	990	319	177	0.82	0.78	0.66	95.7	95.7	94.0	6.0	2.0	2.5	28.70	1670
200	270	355L	3H35L6E3CT000	991	346	197	0.84	0.80	0.70	95.8	95.8	94.1	6.0	2.0	2.5	35.50	1780
250	335	355L	3H35L6H3CT000	991	432	246	0.84	0.80	0.70	95.8	95.8	94.1	6.0	2.0	2.5	43.30	1995

Note: All performance values are subject to tolerance as per IS/IEC 60034-1

DIMENSIONAL DRAWING: IE3 EFFICIENCY SERIES FOR SAFE AREA APPLICATION FOOT MOUNTED (B3) MOTORS

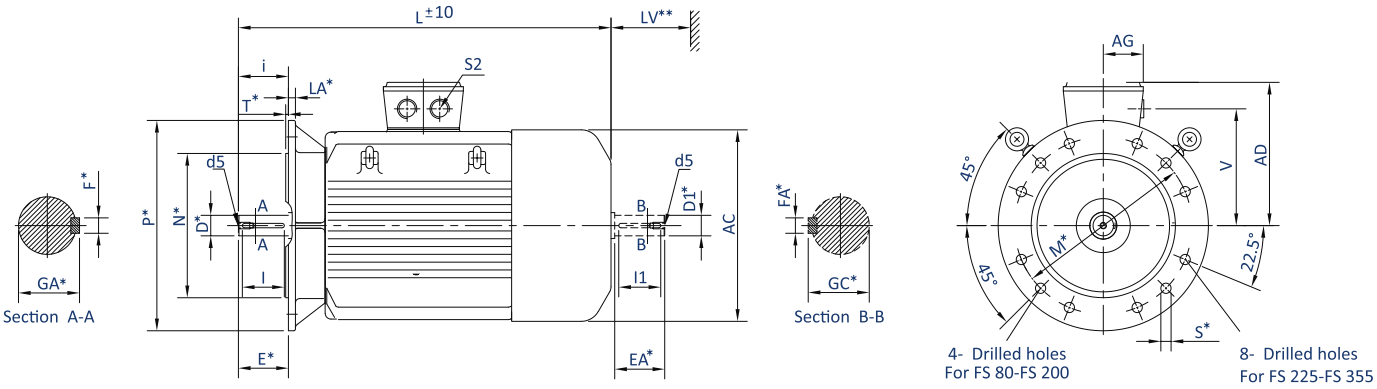


		FIXING						GENERAL											TERMINAL BOX			SHAFT					
IEC Fr. Size	Pole	A*	B*	B1*	C*	H*	K*	AB	BB	AA	BA	BA1	BC	HA	HC	HD	L	LV**	AC	V	AG	S2 BSC	D* DA*	E* EA*	F* FA*	GA* GC*	I I1	d5
80	2&4	125	100	–	50	80	10	150	124	32	36	–	12	9	168	220	292	30	174	191	40	1x3/4"	19	40	6	21.5	35	M6
90S	2,4&6	140	100	–	56	90	10	168	125	34	31.5	–	13	12	177	230	336	35	174	199	52	2x3/4"	24	50	8	27	45	M8
	8																302											
90L	2,4&6		125						150								361											
	8																327											
100L	2&4	160	140	–	63	100	12	190	174	43.5	36	–	17	12	198	257	387	40	195	225	56	2x1"	28	60	8	31	55	M10
	6&8																366											
112M	4&6	190	140	–	70	112	12	220	174	47	36	–	17	12	222	282	419	45	220	246	56	2x1"	28	60	8	31	55	M10
	8																388											
132S	2	216	140	–	89	132	12	256	180	54	50	–	20	16	262	328	518	50	260	291	63	2x1"	38	80	10	41	70	M12
	4																475											
	6&8																459											
132M	4&6		178						218		54						556											
160M	2(9.3kW),4(9.3kW)&6	254	210	–	108	160	15	310	250	58	70	–	20	20	318	383	605	60	316	346	63	2x1"	42	110	12	45	105	M16
	2(11kW)&4(11kW)																635											
	2(15kW)																654											
	8																585											
160L	2		254						294								697											
	4&6(11kW)																679											
	6																649											
	8																629											
180M/L	2,4&6	279	241	279	121	180	15	344	319	65	70	108	20	26	377	470	728	70	394	414	97	2x1 1/2"	48	110	14	51.5	100	M16
200M/L	2,4&6	318	267	305	133	200	19	398	355	85	85	120	25	32	419	536	803	80	438	468	155	2x2"	55	110	16	59	100	M20
225S/M	2	356	286	311	149	225	19	436	361	85	85	85	25	34	461	579	855	90	472	511	155	2x2"	55	110	16	59	100	M20
	4&6																885						60	140	18	64	130	
250M	2	406	349	–	168	250	24	506	425	100	115	–	46	42	495	665	993	100	489	578	243	2x2"	60	140	18	64	130	M20
	4&6																914						65	140	18	69	130	
280S/M	2	457	368	419	190	280	24	540	490	100	110	149	37	42	552	725	1010	115	544	638	243	2x2"	65	140	18	69	130	M20
	4&6																						75	140	20	79.5	130	
315S/M	2	508	406	457	216	315	28	605	540	120	120	155	43	45	617	834	1175	130	604	728	278	2x2"	65	140	18	69	130	M20
	4&6																1167						80	170	22	85	160	
315L	2		508	–					593			–					1342					2x2 1/2"	65	140	18	69	130	
	4&6																1332						90	170	25	95	160	M24
355L	2	610	630	–	254	355	28	710	770	110	170	–	70	45	703	939	1461	145	695	850	403	2x3"	75	140	20	79.5	130	M20
	4&6																1491						95	170	25	100	160	M24

Notes: * This is a mandatory dimension for all standard motors
**Minimum distance for efficient cooling of motor to be maintained by user
1. All dimensions are in mm unless otherwise specified
2. Tolerances on mandatory dimensions are as per IS:1231
3. For non standard motors, dimensions may change. Please contact sales office for details

Notes: 1. Eyebolt is not provided for frame sizes 80 & 90
2. TB Position: To be read as: when viewed from DE side / viewed parallel to the shaft / Cable Entry
(a) 160 to 225 Frame: Top / Center /RHS when viewed from DE side
(b) 80 to 132 Frame: 250 to 355 Frame: Top / Towards drive end / RHS when viewed from DE side

DIMENSIONAL DRAWING: IE3 EFFICIENCY SERIES FOR SAFE AREA APPLICATION FLANGE MOUNTED (B5) MOTORS

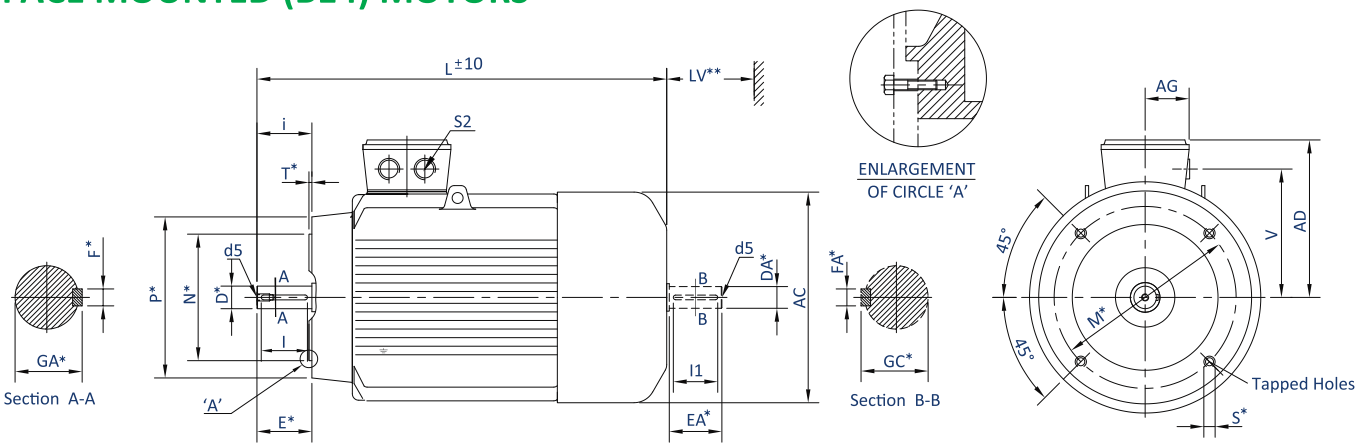


		FIXING					GENERAL						TERMINAL BOX			SHAFT					
IEC Fr. Size	Pole	P*	N*	M*	i	S*	T*	LA*	AD	L	LV**	AC	V	AG	S2 BSC	D* DA*	E* EA*	F* FA*	GA* GC*	l l1	d5
80	2&4	200	130	165	40	12	3.5	10	140	292	30	174	111	40	1x3/4"	19	40	6	21.5	35	M6
90S	2,4&6	200	130	165	50	12	3.5	10	140	336	35	174	109	52	2x3/4"	24	50	8	27	45	M8
	8									302											
90L	2,4&6									361											
	8									327											
100L	2&4	250	180	215	60	15	4	11	157	387	40	195	125	56	2x1"	28	60	8	31	55	M10
	6&8									366											
112M	4&6	250	180	215	60	15	4	11	170	419	45	220	134	56	2x1"	28	60	8	31	55	M10
	8									388											
132S	2	300	230	265	80	15	4	12	196	518	50	260	159	63	2x1"	38	80	10	41	70	M12
	4									475											
	6&8									459											
132M	4&6									556											
160M	2(9.3kW),4(9.3kW)&6	350	250	300	110	19	5	13	220	605	60	316	186	63	2x1"	42	110	12	45	105	M16
	2(11kW)&4(11kW)									635											
	2(15kW)									654											
	8									585											
160L	2									697											
	4&6(11kW)									679											
	6									649											
	8									629											
180M/L	2,4&6	350	250	300	110	19	5	13	290	728	70	394	234	97	2x1 1/2"	48	110	14	51.5	100	M16
200M/L	2,4&6	400	300	350	110	19	5	15	336	803	80	438	268	155	2x2"	55	110	16	59	100	M20
225S/M	2	450	350	400	110	19	5	16	354	855	90	472	286	155	2x2"	55	110	16	59	100	M20
	4&6				140					885						60	140	18	64	130	
250M	2	550	450	500	140	19	5	18	415	993	100	489	328	243	2x2"	60	140	18	64	130	M20
	4&6									914						65	140	18	69	130	
280S/M	2	550	450	500	140	19	5	18	445	1010	115	544	358	243	2x2"	65	140	18	69	130	M20
	4&6															75	140	20	79.5	130	
315S/M	2	660	550	600	140	24	6	22	519	1175	130	604	413	278	2x2"	65	140	18	69	130	M20
	4&6				170					1167						80	170	22	85	160	
315L	2				140					1342					2x2 1/2"	65	140	18	69	130	
	4&6				170					1332						90	170	25	95	160	M24
355L	2	800	680	740	140	24	6	25	584	1461	145	695	495	403	2x3"	75	140	20	79.5	130	M20
	4&6				170					1491						95	170	25	100	160	M24

Notes: * This is a mandatory dimension for all standard motors
**Minimum distance for efficient cooling of motor to be maintained by user
1. All dimensions are in mm unless otherwise specified
2. Tolerances on mandatory dimensions are as per IS:2223
3. For non standard motors, dimensions may change. Please contact sales office for details

Notes: 1. Eyebolt is not provided for frame sizes 80 & 90
2. TB Position: To be read as: when viewed parallel to the shaft
(a) 160 to 225 Frame: Center
(b) 80 to 132 Frame: 250 to 355 Frame: Towards drive end

DIMENSIONAL DRAWING: IE3 EFFICIENCY SERIES FOR SAFE AREA APPLICATION FACE MOUNTED (B14) MOTORS



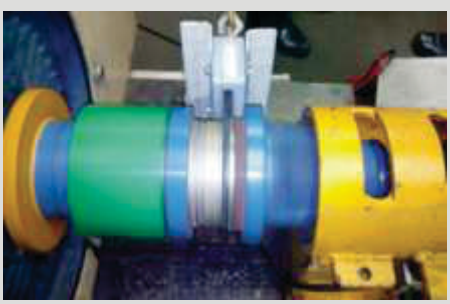
		FIXING					GENERAL					TERMINAL BOX			SHAFT					
IEC Fr. Size	Pole	P*	N*	M*	i	S*	T*	AD	L	LV**	AC	V	AG	S2 BSC	D* DA*	E* EA*	F* FA*	GA* GC*	I I1	d5
90S	2,4&6	140	95	115	50	M8X12	3	140	336	35	174	109	52	2x3/4"	24	50	8	27	45	M8
	8								302											
90L	2,4&6								361											
	8								327											
100L	2&4	160	110	130	60	M8X12	3.5	157	387	40	195	125	56	2x1"	28	60	8	31	55	M10
	6&8								366											
112M	4&6	160	110	130	60	M8X12	3.5	170	419	45	220	134	56	2x1"	28	60	8	31	55	M10
	8								388											

Notes: * This is a mandatory dimension for all standard motors
**Minimum distance for efficient cooling of motor to be maintained by user
1. All dimensions are in mm unless otherwise specified
2. Tolerances on mandatory dimensions are as per IS: 2223
3. For non standard motors, dimensions may change. Please contact sales office for details

Notes: 1. Eyebolt is not provided for frame size 90
2. For the dimensional drawing of 132 frame / B14 mounting, kindly contact our nearest sales office
3. TB Position: To be read as: when viewed parallel to the shaft
(a) 90 to 132 Frame: Towards drive end

Raw Material Warehouse

Motor Assembly

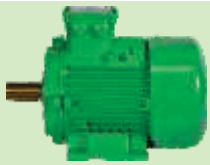


Torque Transducer

Large Motor Test Facility

LV MOTORS PRODUCT RANGE

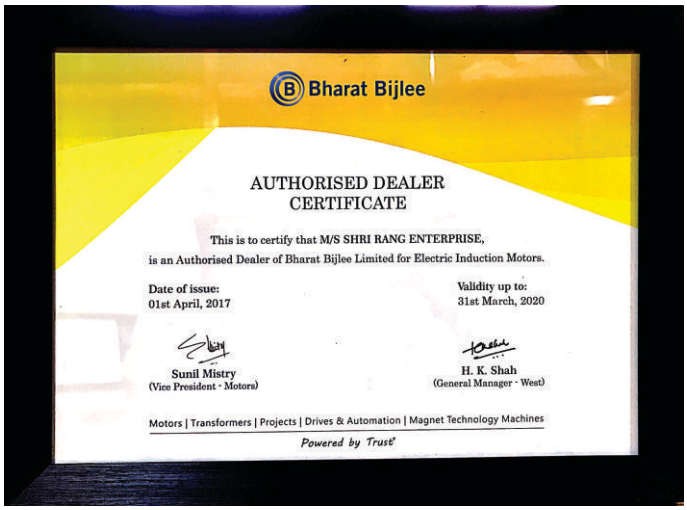
Motors Conform to relevant Indian Standards (IS) & IEC 60034 series
Voltage: 415V +/- 10%, Frequency: 50 Hz +/- 5%, Combined Variation: +/- 10%

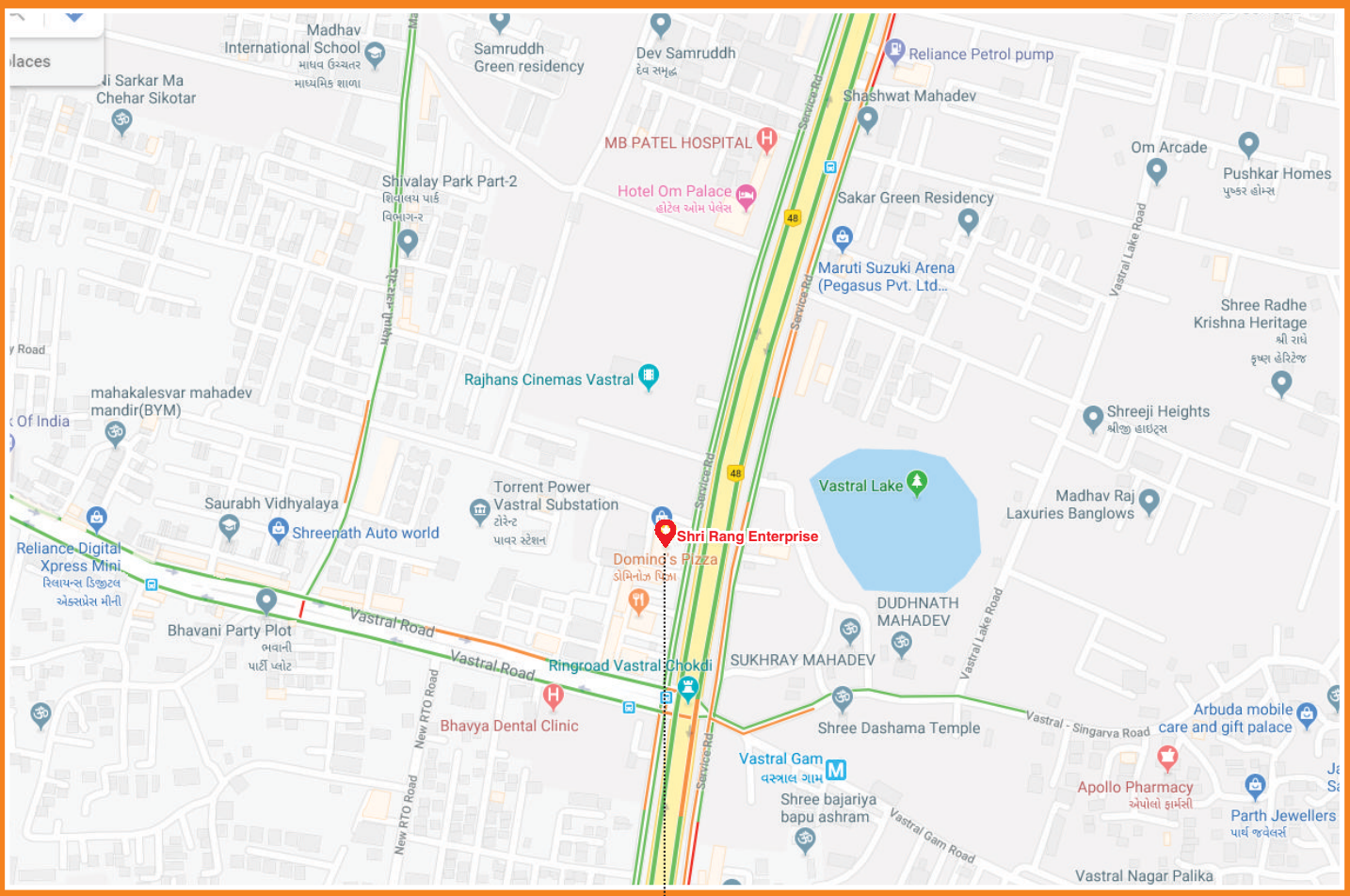
Motor Type	Frame	Power (kW)	Polarity		Standard Technical Specifications
IE2 Motors IE3 Motors Large LT Motors (DCCA)	71 to 355 80 to 355 355 to 450	0.37 to 355 0.55 to 355 250 to 1250	2, 4, 6 2, 4, 6 2, 4, 6, 8		• Ambient: 50° C • Ambient for DCCA: 40° C • Mounting: B3, B5, B35, V1 • Inverter Grade Winding: For IE3 and DCCA • Duty: S1 • RTD & BTD: For DCCA motors
IE4 MOTORS	112 to 225	1.5 to 45	4		• Ambient: 50° C • Mounting: B3, B5, B35, V1 • Inverter Duty Winding • Duty: S1 • VPI: With Class H solvent less Resin
Standard Flame Proof Motors IE2 Flame Proof Motors IE3 Flame Proof Motors	80 to 315 80 to 315 80 to 315	0.37 to 200 0.37 to 200 0.75 to 180	2, 4, 6, 8 2, 4, 6, 8 2, 4, 6		• Ambient: 45° C • Mounting: B3, B5, B35, V1 • Inverter Grade Winding: For IE3 Motors • Duty: S1
IE2 Non - Sparking Motors	71 to 355	0.37 to 355	2, 4, 6		• Ambient: 50° C • Mounting: B3, B5, B35, V1 (B14 upto 132 Frame) • Duty: S1
Crane & Hoist Duty Motors	71 to 355	0.37 to 400	4, 6, 8		• Ambient: 45° C • Mounting: B3, B5, B35, V1 (B14 upto 132 Frame) • Duty: S2, S3, S4, S5 • Offered in DOL & Converter Fed Supply
Brake Motors (With Integral DC Brake)	71 to 132	0.37 to 9.3	2, 4, 6, 8		• Ambient: 50° C • Duty: S1, S2, S3, S4, S5 • Mounting: B3, B5, B35 • Integral DC Brake
Brake Motors (With External Mounted Brake)	71 to 200	0.37 to 22	2, 4, 6		• Ambient: 50° C • Duty: S1, S2, S3, S4, S5 • Mounting: B3, B5, B35 • External Mounted DC Brake/Arrangement
Slip Ring Motors	100 to 160	1.1 to 10	4, 6		• Ambient: 45° C • Mounting: B3, B35 • Duty: S3, S4, S5
Textile Motors	100 to 160	1.1 to 15	4, 6, 8		• Ambient: 50° C • Mounting: B3, B5, B35 • Duty: S1
Cane Unloader Motors	160 to 225	11 to 30	6		• Ambient: 45° C • Start/Stop per Hour: upto 900 • Mounting: B3, B5, B35 • Forced Cooling • Thermostat • Duty: S5, 50% CDF • Shaft Material: EN24

Insulation: Class F with temperature rise limited to Class 'B'
Cooling: IC411, Altitude: up to 1000m above MSL, Rotation: Bi-directional

Optional Features		Applications
• Non Standard Voltage: upto 690V • Shaft Material: EN24 • Enclosure: IP56 / 65 / 66 • Forced Cooling: 132 to 450 Frame • Space Heater: 90 Frame onwards • Roller Bearing: 160 Frame onwards • RTD & BTD: 250 Frame onwards • Insulation: Class H • Thermistor: 80 to 355L	• Insulated Bearing: 160 Frame onwards • High Temperature Grease: Suitable up to 200° C • Higher Polarity on request • SS Hardware • Non std shaft diameter / extension (subject to confirmation) • Non Standard Paint • Provision for Encoder Mounting • Low Vibration as per IS or IEC	Most common applications comprising of: Pump, Fan, Compressor, Packing Machinery, Coiler/De-coiler, Agro Equipment, Food Processing Equipment, Paper Machinery, Agitator, Dairy Equipment, Machine Tool, Air Conditioning, Material Handling, Plastic Machinery, Textile Machinery, Cooling Tower, Crusher, Material Handling
• Shaft Material: EN24 • Enclosure: IP56 / 65 / 66 • Roller Bearing: 160 Frame onwards • Insulation: Class H • Space Heater: 90 frame onwards • Thermistor: 80 to 225 Frame	• Non std shaft diameter / extension (subject to confirmation) • Non Standard Paint • Provision for Encoder Mounting • Low Vibration as per IS or IEC	Fans, HVAC, Pumps,Textiles,hydraulic press
• Non Standard Voltage: 550V • Shaft Material: EN24 • Enclosure: IP56 / 65 / 66 • Space Heater: 90 Frame onwards • Roller Bearing: 160 Frame onwards • Insulation: Class H • 8 pole motor on request • Thermistor: 80 to 315 L	• Insulated Bearing: 160 Frame onwards • Intermittent Duty S3, S4: 80 to 132 Frame in 4 pole only • Non std shaft diameter / extension • Motors for Inverter Duty • Test facility for combined Testing with VFD • Non Standard Paint • Low Vibration as per IS or IEC	Most common applications comprising of: Pump, Fan, Compressor, Material Handling, Agitator, LPG Bottling Plant, Pharma Machinery, Chemical Plant Machinery, Machinery for mines
• Shaft Material: EN24 • Enclosure: IP56 / 65 / 66 • Roller Bearing: 160 Frame onwards • Insulation: Class H	• Insulated Bearing: 160 Frame onwards • Higher Polarity on request • Non std shaft diameter / extension • Motors for Inverter Duty • Test facility for combined testing with VFD • Non Standard Paint • Low Vibration as per IS or IEC	Pump, Fan, Compressor, Material Handling, Agitator, Pharma Machinery
• Non Standard Voltage: 380 to 460V • Shaft Material: EN24 • Enclosure: IP56 / 65 / 66 • Space Heater: 90 Frame onwards • Roller Bearing: 160 Frame onwards • BTD: 250 Frame & above • Insulation: Class H • Thermistor: 80 to 355 L	• Insulated Bearing: 160 Frame onwards • Non std shaft diameter & extension • Motors for Inverter Duty • Non Standard Paint • Low Vibration as per IS or IEC	Crane, Hoist, Lift, Material Handling, Car Stacker, Door Opening
• Non Standard Voltage: upto 460V • Manual Release Arrangement: For 90 to 132 Frame • Motors for Inverter Duty	• Non std shaft diameter & extension • Double Shaft Extension for brake arrangement • Non Standard Paint	Crane, Hoist, Material Handling, Textile, Pharma to name a few
• Non Standard Voltage: upto 460V • Manual Release Arrangement • Motors for Inverter Duty	• Double Shaft Extension for brake arrangement • Non Standard Paint • Higher Braking Torque	Crane, Hoist, Material Handling, Textile, Pharma to name a few
• Non std shaft diameter & extension	• Non Standard Paint	Crane, Hoist, Lift, Material Handling
• Non Standard Voltage: upto 500V • Insulation: Class H	• Motors for Inverter Duty • Non Standard Paint • Low Vibration as per IS	Ginning, Textile Machinery
• Insulation: Class H • Thermistor	• Insulated Bearing: 160 Frame onwards • Non Standard Paint	Cane Loading-Unloading Machine

CERTIFICATIONS





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